

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

FRACTUS, S.A.,

*Plaintiff,*

v.

ZTE CORPORATION, ZTE (USA) INC.,  
ZTE (TX), INC.,

*Defendants.*

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**Case No. 2:17-CV-00561-JRG**

**MEMORANDUM OPINION AND ORDER**

On August 28, 2018, the Court held a hearing to determine the proper construction of the disputed claim terms in United States Patent Nos. 7,394,432 (“the ’432 Patent”), 7,397,431 (“the ’431 Patent”), 8,941,541 (“the ’541 Patent”), 8,976,069 (“the ’069 Patent”), 9,054,421 (“the ’421 Patent”), 9,240,632 (“the ’632 Patent”), and 9,362,617 (“the ’617 Patent”). The Court has considered the arguments made by the Parties at the hearing and in their claim construction briefs. (See Dkt. Nos. 77, 82, 85.) The Court has also considered the intrinsic evidence and made subsidiary factual findings about the extrinsic evidence. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The Court issues this Claim Construction Memorandum and Order in light of these considerations.

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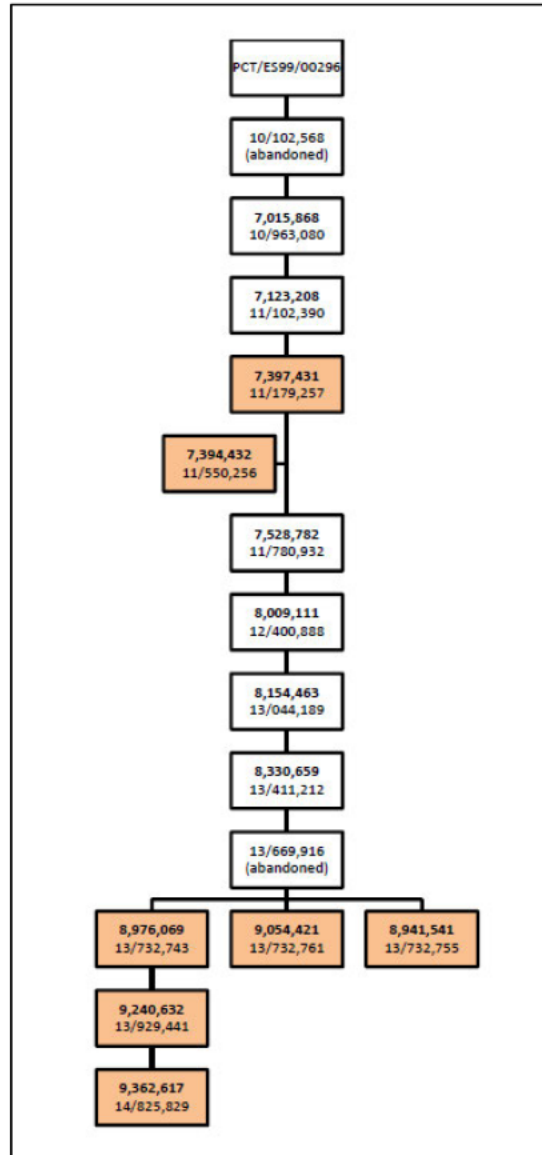
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## I. BACKGROUND

This case involves seven patents (the “Asserted Patents”) that claim priority to a 1999 Spanish PCT application. A family tree of the Asserted Patents, known as the “Multilevel Patents” or “MLV Patents” follows:



(Dkt. No. 77-2 at 2 (Asserted Patents shaded).<sup>1</sup>) The term “multilevel” describes the configuration of an antenna, which requires “at least two levels of detail” in the antenna design. ’432 Patent at

<sup>1</sup> The specifications of the Asserted Patents are virtually identical. The parties cite to the Fractus S.A.

2:60–64. The specification states “the essence of the invention is found in the geometry used in the multilevel structure.” *Id.* at 6:3–4. According to the specification, this “geometry is much more flexible, rich and varied, allowing operation of the antenna from two to many more bands, as well as providing a greater versatility as regards diagrams, band positions and impedance levels, to name a few examples. Although they are not fractal, multilevel antennae are characterised in that they comprise a number of elements which may be distinguished in the overall structure.” *Id.* at 2:32–39. Specifically, multilevel antennae “clearly show several levels of detail (that of the overall structure and that of the individual elements which make it up)” and “provide a multiband behavior and/or a small size.” *Id.* at 2:39–42.

Claim 1 of the ’431 Patent is an exemplary claim and recites the following elements (disputed term in italics):

1. A multi-band antenna comprising:

a conductive radiating element including at least one *multilevel structure*,

said at least one *multilevel structure* comprising a plurality of electromagnetically coupled *geometric elements*,

said plurality of *geometric elements* including at least three portions, a first portion being associated with a first selected *frequency band*, a second portion being associated with a second selected *frequency band* and a third portion being associated with a third selected *frequency band*, *said second and third portions being located substantially within the first portion*, said first, second and third portions defining empty spaces in an *overall structure of the conductive radiating element* to provide a circuitous current path within the first portion, within the second portion and within the third portion, and

the current within said first portion providing said first selected *frequency band* with radio electric behavior substantially similar to the radio electric behavior of said second and third selected *frequency bands*, the current within the second portion providing said second selected *frequency band* with radio electric behavior substantially similar to the radio electric behavior of said first and third selected *frequency bands*, and the current

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specification of the ’432 Patent, and the Court will generally do the same.

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within the third portion providing said third selected *frequency band* with radio electric behavior substantially similar to the radio electric behavior of said first and second selected *frequency bands*.

## II. APPLICABLE LAW

### A. Claim Construction

This Court's claim construction analysis is guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the Federal Circuit reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312. The starting point in construing such claims is their ordinary and customary meaning, which "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312–13.

However, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* at 1313. For this reason, the specification is often "the single best guide to the meaning of a disputed term." *Id.* at 1315. However, it is the claims, not the specification, which set forth the limits of the patentee's invention. *Id.* at 1312. Thus, "it is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). Other asserted or unasserted Claims can also aid in determining a claim's meaning. *See, e.g., Phillips*, 415 F.3d at 1314 (use of "steel baffles" and "baffles" implied that "baffles" did not inherently refer to objects made of steel).

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